COMPUTER NEWS

GENERAL NEWS

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University of Toronto

February 74 No. 109

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Al Heyworth	49 St.Geo	4936
ASSOCIATE DIRECTOR		
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INTERACTIVE TERMINAL SYSTEMS		
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7094 SERVICES		
MANAGER		
Joyce Walton	BT1207	7094
COMPUTER RESEARCH FACILITY		
ASSISTANT MANAGER		
Dennis Smith	SF214	4086

JOB STATUS QUERIES:	
SYSTEM/370	7373
7094	7094
INTERACTIVE TERMINAL SYSTEMS:	
System Status	6234
APL	7200
ATS	7100
CPS	6200
TSO:	
2741 Terminal Malfunctions	7107
2741	7303
TTY	7390

UTCC COMPUTER EQUIPMENT

SYSTEM/370 MODEL 165

- located in SF103/105/112
- provides General Purpose Job Stream, High Speed Job Stream and TSO services
- 3072K bytes of memory
- 1 drum
- 10 disk drives IBM (3330)
- 8 disk drives IBM (2314)
- 6 magnetic tape drives (4 9-track and 2 7-track)
- 6 display consoles
- 6 printers
- 5 card readers
- 1 card punch
- 7 remote batch terminals
- 1 paper tape reader
- Calcomp plotters (11" and 30")
- Gould plotter (11")
- OS/MVT with HASP

SYSTEM/360 MODEL 65

- located in McLennan Physical Laboratories
- provides Interactive Systems Service
- 1536K bytes of core
- 16 disk drives (2314)
- 2 9-track magnetic tape drives
- 1 printer
- 1 card reader
- 1 card punch
- 140 typewriter terminals
- OS/MVT with APL, ATS, and CPS

7094 II

- located in Room 1203 Burton Tower
- 32K words of core
- 1 disk
- 8 magnetic tape drives
- input/output via a 1401 computer

IBM/360 MODEL 44

- located in SF207
- 256K core
- 10 disk drives (8 2314's and 2 2311's)
- 2 2401 tape drives
- 2 1403 printers
- 2 2501 card readers
- 2701 data adapter
- 2250 video display unit
- RADDTS
- Calcomp microfilm plotter
- minicomputers
- VW01 Digitizing Tablet
- DEC GT40

PERSONNEL CHANGES

Good luck to Chris-Michael Alevritis. Chris, a computer operator with 7094 Services, is leaving the Centre this month and we wish him success in his new endeavour.

Welcome to Leslie De Cunha, Raymond Small, June Bridges and Charles Davis. Leslie and Raymond are new programmer-operators with Interactive Terminal Systems. June is the new secretary in the Liaison Office and Charles is a computer operator with System/370 Services. We hope you will enjoy working with us.

Trudy Holland

RECENT ACQUISITIONS IN THE DCS LIBRARY

Adams, J. Mack, and Haden, D.H.
COMPUTERS: APPRECIATION, APPLICATIONS, IMPLICATIONS - AN INTRODUCTION
New York, Wiley, 1973.

American Society for Information Science
PROCEEDINGS OF THE ANNUAL MEETING NO.9 (1972).

Association for Computing Machinery
PROCEEDINGS OF THE NATIONAL CONFERENCE, 28TH (1973).

Bohl, M. and Walter, A.
INTRODUCTION TO PL/1 PROGRAMMING AND PL/C
Chicago, Science Research Association, 1973.

Cherkasova, M.P.
COLLECTED PROBLEMS IN NUMERICAL METHODS
Groningen, Wolters-Noordhoff, 1972.

Coury, F.F., Ed.
A PRACTICAL GUIDE TO MINICOMPUTER APPLICATIONS
New York, IEEE Press, 1972.

Design Automation Workshop
PROCEEDINGS, 10TH (1973).

Gruenberger, Fred J. and Babcock, D.
COMPUTING WITH MINI-COMPUTERS

Haupt, F.E.
ELEMENTARY ASSEMBLER LANGUAGE PROGRAMMING
Columbus, Ohio, Charles E. Merrill, 1972.

Kapur, G.K.
PROGRAMMING IN STANDARD COBOL
Chicago, Science Research Association, 1973.

National Academy of Sciences, Washington, D.C. Project on Databanks
DATABANKS IN A FREE SOCIETY: COMPUTERS, RECORD-KEEPING AND PRIVACY
A.F. Westin and M.A. Baker, Eds.
New York, Quadrangle Books, 1972.

Norrie, Douglas H., and de Vries, G.
THE FINITE ELEMENT METHOD; FUNDAMENTALS AND APPLICATIONS
New York, Academic Press, 1973.

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Rust, B.W. and Burrus, W.R.
MATHEMATICAL PROGRAMMING
AND THE NUMERICAL SOLUTION
OF LINEAR EQUATIONS
New York, American Elsevier, 1972.

Salomaa, Arto
FORMAL LANGUAGES
New York, Academic Press, 1973.

Stewart, Gilbert W.
INTRODUCTION TO MATRIX
COMPUTATIONS
New York, Academic Press, 1973.

Tewarson, R.P.
SPARSE MATRICES
New York, Academic Press, 1973.

Yu, Francis T.S.
INTRODUCTION TO DIFFRACTION,
INFORMATION PROCESSING AND
HOLOGRAPHY
Cambridge, Mass., M.I.T. Press, 1973.

S/370 RELIABILITY

The uptime percentage for January 1974 was 97.0 and the number of unscheduled IPL's per day was 1.37. The scheduled hours of production for January totalled 501.

These figures, when compared with December's statistics (UPTIME=98.6 and IPL's=0.62), indicate a substantial decrease in system reliability. Overall, the percentage breakdown of total system downtime for January was: Hardware: 511 minutes (57.5%); Software: 208 minutes (23.4%); and Others: 170 minutes (19.1%). The major items contributing to these totals were as follows:

JAN

12: 144 minutes downtime were attributed to a malfunction in the glycol coolant system resulting in unacceptable temperature levels. To recover from these irregularities, the building engineers were forced to switch to city water.

16 to 29: 131 minutes downtime were attributed to ITEL storage problems, the majority of which comprised numerous double bit and multiple bit errors causing hard system failures. ITEL corrective maintenance was increased substantially in order to isolate and repair these bad storage locations. ITEL preventive maintenance will also be increased substantially to prevent future recurrences of this nature.

16 to 28: 58 minutes downtime were attributed to a HASP problem resulting in catastrophic errors whenever a faulty route command was entered. This problem has been isolated and clearer documentation explaining this command is being prepared.

30: 260 minutes downtime were attributed to a hardware problem in the 3830 disk control unit. The problem was found to be a bad card which was replaced by IBM. S/370 Services is reconfiguring the system so that services such as HSJS can be supported in the event that a 3830 control unit fails.

Dave Rauch

```
DOWNTIME_REPORT_ON___S/370__FOR_JAN_74

----------------------------------------------------------------------------------------------------------------------------
|                                                 REIPLS(FREQ) // DOWNTIME (MN)                                            |
| DAY  REIPL   DNTIME 0    5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95  100|
======================+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+|
| T  1 (CENTER CLOSED) |                                                                                                    |
| W  2   1         5  |☐****                                                                                               |
| T  3   1        10  |☐*********                                                                                          |
| F  4   1        10  |☐*********                                                                                          |
| S  5   0         0  |                                                                                                    |
| S  6   2        25  |☐☐***********************                                                                           |
| M  7   2        17  |☐☐***************                                                                                   |
| T  8   1        10  |☐*********                                                                                          |
| W  9   0         0  |                                                                                                    |
| T 10   0         0  |                                                                                                    |
| F 11   0         0  |                                                                                                    |
| S 12   1       147  |☐*********************************************************************************************** 147|
| S 13   0         0  |                                                                                                    |
| M 14   1        17  |☐****************                                                                                   |
| T 15   1        14  |☐*************                                                                                      |
| W 16   2        36  |☐☐**********************************                                                                |
| T 17   2        40  |☐☐**************************************                                                            |
| F 18   0         0  |                                                                                                    |
| S 19   1         7  |☐******                                                                                             |
| S 20   0         0  |                                                                                                    |
| M 21   1        20  |☐*******************                                                                                |
| T 22   3        45  |☐☐☐******************************************                                                       |
| W 23   4        30  |☐☐☐☐**************************                                                                      |
| T 24   0         0  |                                                                                                    |
| F 25   4        40  |☐☐☐☐************************************                                                            |
| S 26   1        73  |☐************************************************************************                           |
| S 27   1         5  |☐****                                                                                               |
| M 28   6        47  |☐☐☐☐☐☐*****************************************                                                     |
| T 29   3        23  |☐☐☐********************                                                                             |
| W 30   2       268  |☐☐********************************************************************************************** 268|
| T 31   0         0  |                                                                                                    |
----------------------------------------------------------------------------------------------------------------------------

 LEGEND      : ONE ☐  =ONE REIPL
               ONE *  =ONE MINUTE OF DOWNTIME
```

```
                    _S/370__DOWNTIMES_DURING_JAN_74

--------------------------------------------------------------------------------------------------------------------------
|                                                 TIME OF DAY (HOURS)                                                    |
|  DAY   RELOADS DNTIME 0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24|
========================+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+|
| T  1 (CENTER CLOSED)  |                                                                                                |
| W  2      1      5    |                                      S                                                         |
| T  3      1     10    |                                                                                 H              |
| F  4      1     10    |                                              S                                                 |
| S  5      0      0    |                                                                                                |
| S  6      2     25    |                                     HH            U                                            |
| M  7      2     17    |S                                                                         S                     |
| T  8      1     10    |                                                                 H                              |
| W  9      0      0    |                                                                                                |
| T 10      0      0    |                                                                                                |
| F 11      0      0    |                                                                                                |
| S 12      1    147    |                                    OOOOOOOOOO           H                                      |
| S 13      0      0    |                                                                                                |
| M 14      1     17    |                                I                                          S                    |
| T 15      1     14    |                                I                            S                                  |
| W 16      2     36    |                                        H                                             SS        |
| T 17      2     40    |                                                 S                                   SS         |
| F 18      0      0    |                                                                                                |
| S 19      1      7    |                                                  S                                             |
| S 20      0      0    |                                                                                                |
| M 21      1     20    |I H                                                                                             |
| T 22      3     45    |        S                                                             HH H                      |
| W 23      4     30    |             H                         S                                  SS                    |
| T 24      0      0    |                                                                                                |
| F 25      4     40    |          S                                H               H                H                   |
| S 26      1     73    |                                    HHHHH                                                       |
| S 27      1      5    |                                                 H                                              |
| M 28      6     47    |  H      S  S                                                    H        H  S                  |
| T 29      3     23    |                    H  S                                                              S         |
| W 30      2    268    |                                                S                     HHHHHHHHHHHHHHHHHH        |
| T 31      0      0    |                                                                                                |
--------------------------------------------------------------------------------------------------------------------------
LEGEND :    H FOR HARDWARE
            S FOR SOFTWARE                 STATISTICS
            O FOR OPERATIONAL
            U FOR UNEXPLAINED
            I FOR LATE IPL

                                       TOTAL SCHEDULED HOURS OF PRODUCTION :  501
                                       TOTAL DOWNTIME (MN)  :  889 , AVG/DAY :  29.63 , AVG/PROD HOUR :   0.89
                                       TOTAL REIPL'S        :   41 , AVG/DAY :   1.37
                                       DOWNTIME RATE IS     :  2.96 PERCENT OF SCHEDULED PRODUCTION HOURS
```

TSO TOPICS

In keeping with our plans for the ongoing improvement of TSO, System 370 Services has made a number of changes to TSO. Terminal response time has been markedly improved by simplifying the foreground-background dispatching interface and by increasing the efficiency of the O/S initiation-termination process. In addition, the REGISTER, SCRATCH, COMP and BACKLOG commands have been re-written as command processors, and all are now more convenient and informative. The "UTILITY DATASET NOT FREED" messages are finally gone. Also re-written as a command processor is the RJE command SUBMIT. This command, as well as the SEND command, can now be used while in EDIT mode. The HELP file has been updated to reflect these changes, and has also been reorganized into a series of command groups.

Several specific problems have been solved. Due to a bug in the SEND command routines, users were not being notified when their RJE-submitted background jobs terminated, and could not send messages to other users who were not logged on. The system has been adjusted so that all these messages can be sent. A side benefit is that users are similarly notified when a batch job is cancelled by HASP due to an invalid job statement or cancelled by the SETUP processor due to an invalid /*SETUP statement.

For a few days in January, the response time was extremely slow because of a system loop which resulted from an I/O error condition. This loop was produced when the system error recovery routines endlessly tried to correct the problem. This problem has been corrected.

Changes have also been made to the charges for TSO service. The overhead involved in LOGON and LOGOFF is no longer billed directly to the user. Main storage charges are now calculated on an interval sampling basis. Connect time charges have been implemented, and the LOGOFF message now gives correct information for commerical users.

Several new processors have been installed in addition to the previously announced interactive FORTRAN and PL/I. An ASM command for Assembler(G) is being debugged; it is presently usable, though it gives several extraneous messages. The SPEAKEZ command for the Speakeasy mathematically-oriented processor is being tested by Computer Centre staff and several members of the Department of Computer Science. A "SPIT" command procedure to call the SPITBOL processor is also available.

We are constantly seeking ways to further improve TSO system performance. To this end we are in touch with many TSO installations throughout North America and exchange problems and hints. We welcome all suggestions for improvements. These may be sent to Ian Darwin in Room 116, Sandford Fleming Building, 10 King's College Road, Toronto M5S 1A1 or by phone at (416) 928-6355 or 7318.

Ian Darwin

TAPE DENSITY JCL

Currently, S/370 Services provides both 7 and 9 track magnetic tape drives with magnetic tape densities of up to 1600 bits per inch (BPI). In a few months, S/370 Services may be obtaining new 6250 BPI magnetic tape drives. In order to prevent future problems, the following magnetic tape JCL standards have been implemented. These standards are the same as those defined by IBM with reference to generic name and are documented in the IBM manual, Job Control Language Reference (Form GC28-6704). This manual is available for reference in the Advising Office, SF117, and from the Terminal Coordinators.

For 7 track tapes, the user should specify:

```
UNIT=2400-2,DEN=x
where x is 0 for 200 BPI density
           1 for 556 BPI density
           2 for 800 BPI density
```

For 9 track tapes, the user should specify both the UNIT and DENSITY parameters as follows:

```
UNIT=2400,DEN=2   for 800 BPI
                  density
UNIT=3400-3,DEN=3 for 1600 BPI
                  density
```

S/370 Services now provides four 3400 series 9 track tape drives and all 2400 series requests are satisfied from this group. Currently, some users omit the density parameter from the DCB option and take the system defaults. This practice may result in problems with future configurations which include IBM 6250 magnetic tape drives. Therefore, DEN should always be coded in the DCB parameter as the present system default of 1600 BPI on 9 track tape drives may be changed.

Users with questions or problems concerning tape density should contact Herb Kugel at 928-7286.

Herb Kugel

CENSUS TAPES (1971 SHORT FORM AGGREGATE TAPES)

The 1971 Short Form Aggregate Census Tapes are now available, both in their original packed decimal format, and in unpacked form. Changes in the packed decimal tape descriptions were required to correctly describe the newly converted tapes; the new documentation is being made available through the various Terminal Coordinators. As a result of the conversion process, 10 tapes were required to contain the information previously contained on 9 packed decimal tapes. The new tape serial numbers and various record characteristics are also included in the updated documentation.

The major result of the conversion process is that the data on the Short Form Aggregate Census Tapes can now easily be accessed using SPSS, Datatext, or any other FORTRAN I/O based program.

Len Prepas

Editor's Note: The following article was submitted by John Roth and Bob Stobie of the Department of Chemistry. We would like to encourage other users to submit articles for publication in COMPUTERNEWS. If you have an article of interest to our users, please contact the Editor or his assistant (SF128 or 928-2694).

FORTRAN G1 DEBUGGING AID

FORTRAN G1 users! Have you too been plagued by messages stating that you did some nasty thing like dividing by zero, and then been frustrated by being given the PSW, entry point, and the statement number that called the program which caused the abend, without saying which statement number you were actually executing? Bob Stobie and John Roth of the Department of Chemistry may have relief for you. Using a simple program that edits the usual SYSPRINT output from the FORT step of the existing procedures FORT, FORTLE, FORTLEGO and FORTGO, the displacement of the beginning of each FORTRAN statement from the beginning of the program segment is printed in the source listing next to that statement. This allows the user to take the PSW at abend, the entry point address, and the LINKAGE EDITOR map, perform a few simple hexadecimal subtractions, and determine which statement failed, which is generally enough to point out the reason for the abend. All output from the compile step is unaltered, except for the printed displacements and a blank inserted to separate the sequence field from the text of the statement. This useful debugging aid is available simply by coding FORD, FORDLE, FORDLEGO, or FORDGO in place of above mentioned procedures on the EXEC card. The use of all other parameters is unaltered from the UTCC

versions of these procedures. However, if PARM.FORT is changed, LIST must be included or the displacements may not be printed. The extra step costs only a few cents more, and is more convenient than using PARM.FORT=MAP. Any problems should be directed to the Program Advisers in Room SF117, 928-8599.

John Roth
Bob Stobie

HSJS MONTHLY STATISTICS

High Speed Job Stream usage has continued to grow. During January 1974, 129,336 jobs were submitted through HSJS for an increase of 38% as compared with last year's figure of 93,553 jobs. The table and graph reproduced below are for the period January 2, 1974 through January 31, 1974. Note that the CPU time reported is in hundredths of a minute.

Mark Tapia

```
                       HSJS RESOURCE USAGE BY PROCESSOR FOR  2/01/74 TO 31/01/74

                 |  TOTAL  |  TOTAL  |  TOTAL   |  TOTAL   ||  AVG   |  AVG  |  AVG  ||
                 |  #JOBS  |  CPU    |  CARDS   |  LINES   ||CPU*10  | CARDS | LINES ||
-------------------------------------------------------------------------------------
WATFIV     -W |    65203 |   55719 | 7492330 | 8865271 ||      8 |   114 |   135 ||
SPITBOL    -T |     4662 |    4011 |  439896 |  753414 ||      8 |    94 |   161 ||
PL/C       -C |    46879 |   67151 | 3090097 |10596694 ||     14 |    65 |   226 ||
UTILITY    -U |     4429 |     867 |  580091 |  738427 ||      1 |   130 |   166 ||
ALGOLW     -G |     4756 |    2719 |  377013 |  651370 ||      5 |    79 |   136 ||
PLUTO      -P |      553 |     498 |   47343 |   84121 ||      9 |    85 |   152 ||
ASMG       -A |     1877 |    1902 |  115034 |  241840 ||     10 |    61 |   128 ||
WATBOL     -B |      575 |     564 |   96037 |   95875 ||      9 |   167 |   166 ||
SIMON      -S |      357 |      59 |    9853 |   25272 ||      1 |    27 |    70 ||
ASSIST     -I |        0 |       0 |       0 |       0 ||      0 |     0 |     0 ||
LISP       -L |       45 |       7 |    1125 |    2287 ||      1 |    25 |    50 ||
OTHER      -? |        0 |       0 |       0 |       0 ||      0 |     0 |     0 ||
OTHER      -? |        0 |       0 |       0 |       0 ||      0 |     0 |     0 ||
-------------------------------------------------------------------------------------
           TOTAL 129336    133499  12248819  22054506         10      94      170
```

```
ALL                       HSJS SUMMARY FOR  2/01/74 TO 31/01/74

PROCESSOR       #JOBS  % TOTAL |  #JOBS  TIME+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
WATFIV    -W    65203   (50%)  |    868     0|WWWCCCGS
SPITBOL   -T     4662   ( 3%)  |    863      |WWWCCCCG
PL/C      -C    46879   (36%)  |    732     1|WWWCCCG
UTILITY   -U     4429   ( 3%)  |    592      |WWCCCG
ALGOLW    -G     4756   ( 3%)  |    401     2|WCC
PLUTO     -P      553   ( 0%)  |    390      |WCG
ASMG      -A     1877   ( 1%)  |    270     3|WC
WATBOL    -B      575   ( 0%)  |    223      |WC
SIMON     -S      357   ( 0%)  |    198     4|WC
ASSIST    -I        0   ( 0%)  |    163      |W
LISP      -L       45   ( 0%)  |    140     5|W
OTHER     -?        0   ( 0%)  |    126      |W
OTHER     -?        0   ( 0%)  |     42     6|
                               |     88      |B
                               |      0     7|
                               |     12      |
                               |    826     8|WWWWWCCC
                               |   2004      |WWWWWWWWWCCCCCCCUGA
                               |   2386     9|WWWWWWWWWWWTCCCCCCCCUG
                               |   3462      |WWWWWWWWWWWWWWWTCCCCCCCCCCCCCUGG
                               |   3255    10|WWWWWWWWWWWWWWTTCCCCCCCCCCCCUG
                               |   3916      |WWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCUGA
                               |   4664    11|WWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCUGA
                               |   5159      |WWWWWWWWWWWWWWWWWWWWWWWTCCCCCCCCCCCCCCCCCCCCUUGA
SHIFT   # JOBS  % TOTAL        |   5106    12|WWWWWWWWWWWWWWWWWWWWWWWTCCCCCCCCCCCCCCCCCCCCUUGA
0 - 8     5108     ( 3)        |   6071      |WWWWWWWWWWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCCCCUUGGA
8 - 4    75881     (58)        |   6062    13|WWWWWWWWWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCCCCCUUGGA
4 - 12   48347     (37)        |   6327      |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWTTTCCCCCCCCCCCCCCCCCCCCCCUUGGA
                               |   5925    14|WWWWWWWWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCCCCUUGGA
                               |   6110      |WWWWWWWWWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCCCCCUUGGA
   96722 JOBS (74%) WERE RUN   |   6616    15|WWWWWWWWWWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCCCCCCCCCCUUGA
     FROM 10 AM TO 7 PM        |   7992      |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCCCCCUUUUGGA
                               |   6753    16|WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCUUGGA
                               |   7170      |WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWTTCCCCCCCCCCCCCCCCCCCCCCCUGG
                               |   4577    17|WWWWWWWWWWWWWWWWWWWWWWWWTCCCCCCCCCCCCCCUGGA
                               |   3919      |WWWWWWWWWWWWWWWWWWWWWWTCCCCCCCCCCCUGA
                               |   3611    18|WWWWWWWWWWWWWWWWWWWWTCCCCCCCCCCUGA
                               |   2989      |WWWWWWWWWWWWWWTCCCCCCCCCCUGA
                               |   2934    19|WWWWWWWWWWWWWWTCCCCCCCCCUGA
                               |   3129      |WWWWWWWWWWWWWWWWTCCCCCCCCCCUG
                               |   3328    20|WWWWWWWWWWWWWWWWWTCCCCCCCCCCCUG
                               |   3323      |WWWWWWWWWWWWWWWWWTCCCCCCCCCCCUG
                               |   2945    21|WWWWWWWWWWWWWWWWTCCCCCCCCCUG
                               |   2732      |WWWWWWWWWWWWWWWTCCCCCCCCGA
                               |    325    22|WWC
                               |    249      |WG
                               |    160    23|G
                               |    203      |WG
                                             +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
                          TOTAL 129336       0         1070      2140      3210      4280      5350      6420      7490
```

GOULD PRINTER/PLOTTER

Thursday, February 7, 1974 at 13:30 hours, the last plots were run on the Gould 4800. By 14:00 hours the software had been changed, the equipment reconfigured and the first production plots were produced on the Gould 5000. Users should find that the Gould 5000 produces plots with superior resolution than those plotted on the Gould 4800. The Gould 4800 used 80 dots per inch, while the Gould 5000 uses 100 dots per inch. This increase in density should provide plots with improved quality.

Plotting Problems

The following plotter problems have been identified and S/370 Services staff are seeking satisfactory solutions:

1. The density of plot is not consistent. This problem occurs when the toner in the machine falls to the bottom of the toner tank. Once the machine is activated, the toner is circulated and the plots become darker. However, plots produced after the machine has been idle for some time, are too light. It may be possible to activate the toner circulation motor before plotting the first job in the batch. This will require some software changes.

2. Plots may be lost due to misfiling, hardware or software problems. In some cases, a plot appears to execute normally but the output is never plotted. This occurs when the batch dump program fails and all jobs waiting to plot are lost. The cause of the dump program failures is under investigation.

Bob Radcliffe

FAREWELL TO THE MODEL 20

Erindale Computer Services said goodbye to its IBM 360/20 in February. It has been replaced by a shiny new REMCOM Model 4780 with a Univac Verifier-Interpreter-Punch (VIP) available on-line to provide facilities for punched output. The REMCOM has more than doubled the former 250 lines per minute speed to approximately 600 lines per minute. The printer backlog had been the major problem confronting Erindale users for some time and users should see a great improvement with the REMCOM equipment. Booklets explaining "How to Use the Remcom Terminal" are available free of charge at the computer room.

Revised HASP job limits are now in effect. To reflect the greater printing capacity of the REMCOM, the previous printed output limit of 1500 lines has been increased to 3000 lines or less per job. Output exceeding this limit is placed in a "hold" queue for release at a later time. (Note that all such jobs must have //ERINT/name coded in the

...Cont'd

FAREWELL MODEL 20 Cont'd...

name field of the job card for possible routing downtown, if necessary.) The punched output limit remains at 700 cards or less per job, and the former card input limit has been discontinued.

The VIP operates on-line to the terminal and is usually unavailable for use as a keypunch, except in cases of extreme need. Special arrangements must be made for such off-line usage.

Enquiries regarding the new equipment will be welcomed by Computer Services personnel who will be glad to demonstrate its operation. We hope the increased printing speed of the REMCOM has significantly improved the computer services available at Erindale.

Vaughn Lawrason

INTERACTIVE SYSTEMS RELIABILITY

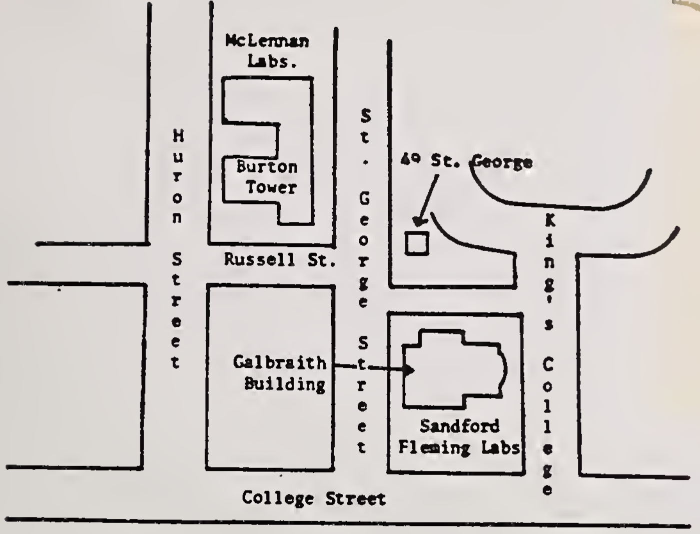
The uptimes achieved for the month of January for each of APL, ATS, and CPS were 97.52%, 97.54% and 97.52% respectively. The total number of scheduled hours of operation during the month of January was 492.5. In addition to the scheduled time, APL, ATS and CPS were also available for approximately 140 hours of unattended weekend operation.

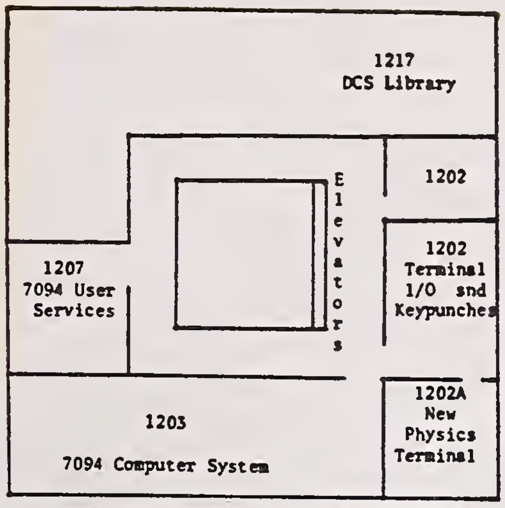
The following table shows the time lost due to system failures for each of the systems: nine unscheduled IPL's were required as a result of the failures. Problems with the Multiplexor Channel and power failures accounted for most of the down time.

Kam Jain

DATE	DOWNTIME (minutes)			REASON
	APL	ATS	CPS	
Thu. Jan. 3	30	13	15	*Solid System (Test I/O waiting channel end seek) (HARDWARE)
Fri. Jan. 4	21	17	19	*Solid System Multiplexor Ch. (HARDWARE)
Mon. Jan. 7	18	19	20	*CPU Failure (HARDWARE)
Thu. Jan. 10	396	398	400	*Multiplexor Ch. Channel Control, Interface (HARDWARE)
Sun. Jan. 13	18	19	20	*Solid System (Undetermined)
Thu. Jan. 17	14	16	7	IPL late due to Memorex Maintenance
Fri. Jan. 18	11	13	14	*Hasp. Catas. Error (SOFTWARE)
Sat. Jan. 19	198	202	204	Power Failure
Mon. Jan. 21	10	10	11	*Power Failure
Mon. Jan. 21	11	10	12	*Power Failure
Fri. Jan. 25	7	9	11	*Power Failure
Total	734	726	733	*IPL Required

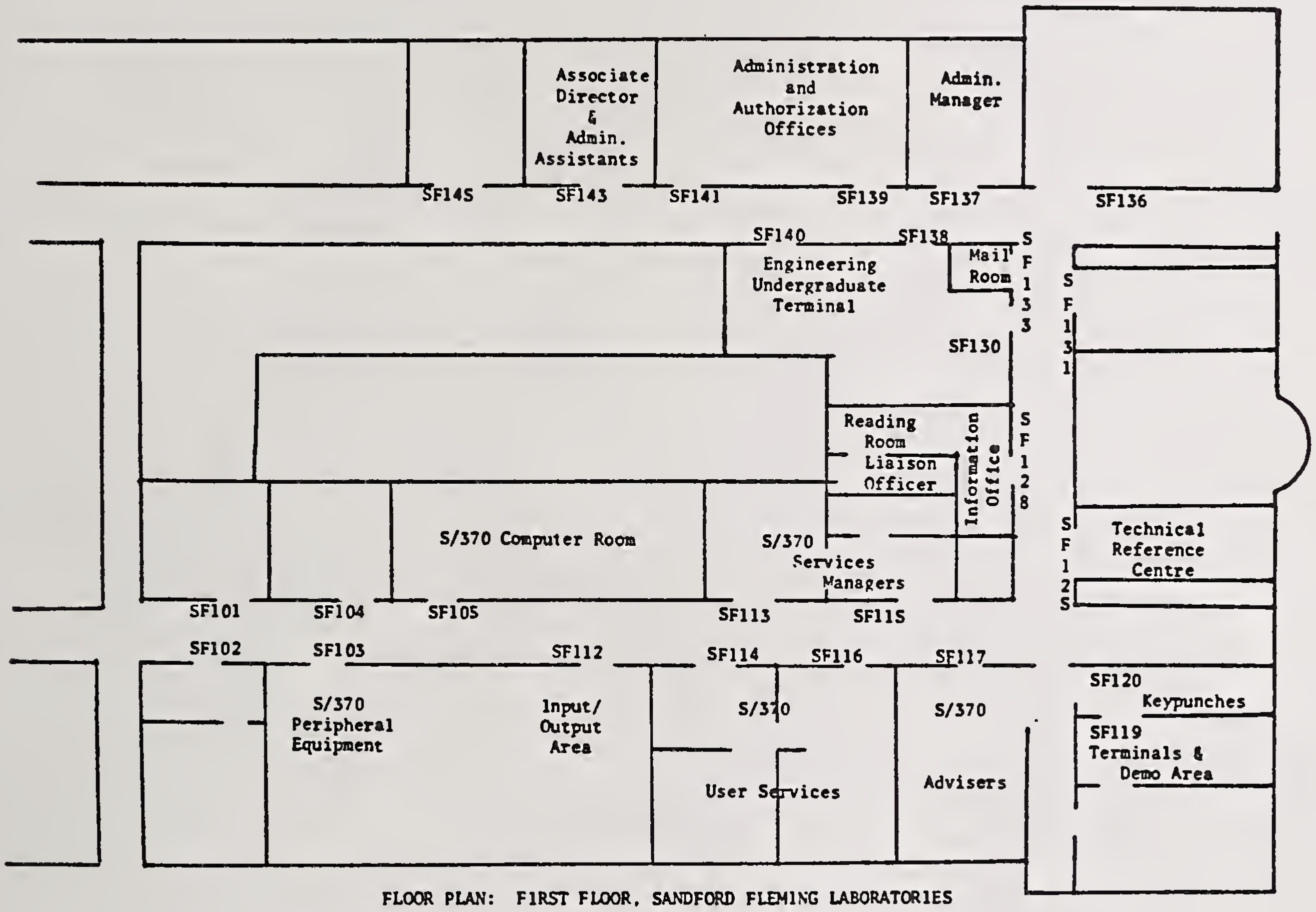
System Failures January 1 to January 31, 1974



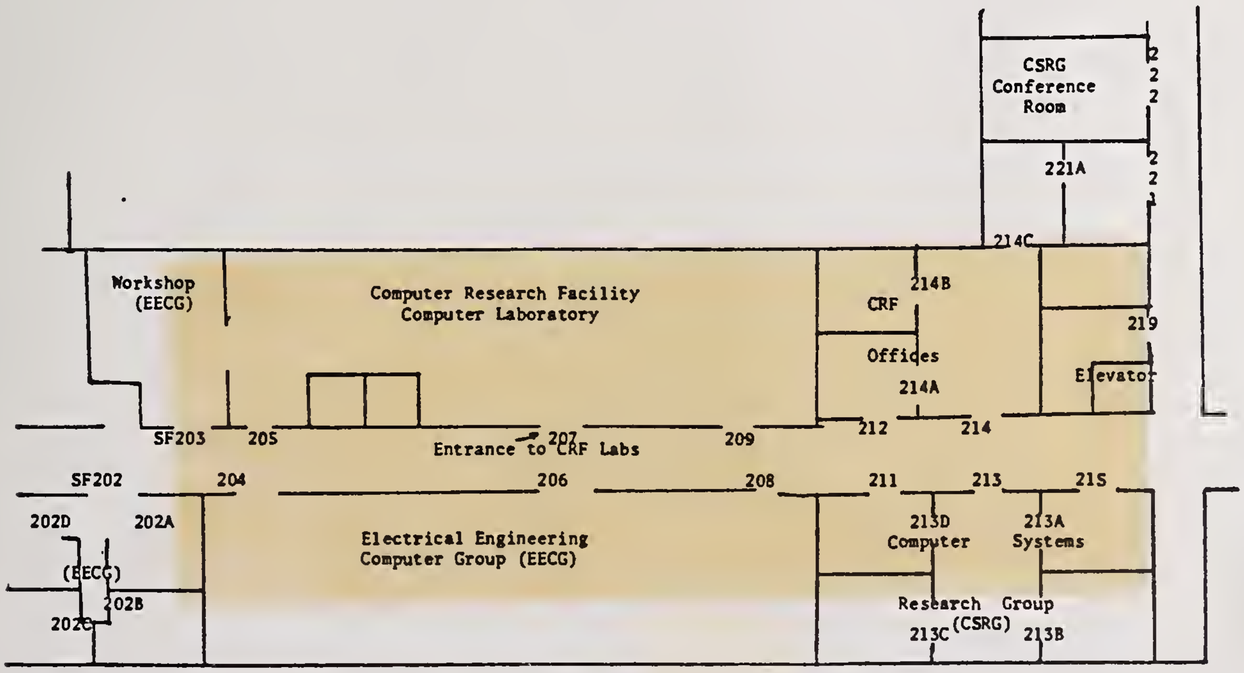


FLOOR PLAN: TWELFTH FLOOR, BURTON TOWER

UNIVERSITY OF TORONTO COMPUTER CENTRE



FLOOR PLAN: FIRST FLOOR, SANDFORD FLEMING LABORATORIES



FLOOR PLAN: SECOND FLOOR, SANDFORD FLEMING LABORATORIES

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